
Abstract

In order to obtain a magnetic bearing apparatus in which a large cooling effect is exerted by a simple configuration, fins 15 which form an air flow in a rearward direction are disposed in a rear portion and outer diameter of a rotary shaft 1, a generator 16 which converts an air flow produced by rotation of the fins 15 to a compressed vortex flow, and which has an axial through hole is fixed with being separated from the fins 15 by an appropriate gap, and a tube 20 in which the inner diameter is larger than the diameter of the through hole 19 of the generator 16, and which has a control valve 21 at the rear end is provided in rear of the generator 16. Cooling wind is produced by a driving force of the rotary shaft 1. Cooling wind flow paths 22 through which the cooling wind is to be passed, and which axially elongate are formed in the rotary shaft 1.